The Andrew W. Mellon Foundation
Scholarly Communications Program
Proposal Cover Sheet

Date of Submission	7/7/2009
Legal Name of Grantee	The Trustees of Columbia University in the City of New York

Proposed Project:

Project Title	2CUL (Too Cool)
Request Amount	$384,391
Proposed Grant Term	27 months
Proposed Start Date	10/1/2009
Proposed End Date	12/31/2011
Internal Reference Number	

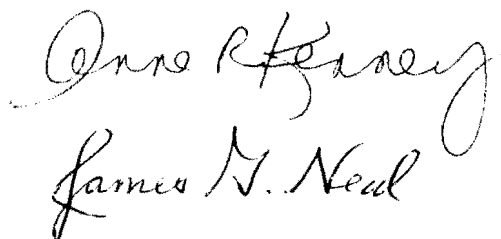Principal Investigator(s) and Title(s):

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    Name   Patricia Valencia
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July 7, 2009

Dr. Donald J. Waters
Program Officer, Scholarly Communications
The Andrew W. Mellon Foundation
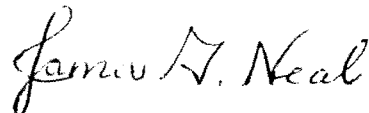140 East 62nd Street
New York, NY 10021

Dear Don:

I am pleased to submit the enclosed proposal from the Columbia University Libraries requesting $384,391 for *2CUL*, in partnership with Cornell University Library.

The objective of this planning project is to lay the foundation for a permanent and broad integration of resources, collections, services, and expertise between the Columbia University Libraries (CUL) and the Cornell University Library (CUL). The expectation is that this new entity will result in enhanced production capabilities, a reduction in overall library expenses, and greater access to critical collections and services than is possible at either Columbia or Cornell alone.
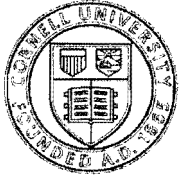
Thank you very much for considering this proposal, and we are pleased to answer questions and provide additional information as you request.

With best wishes, I am

Sincerely,

James G. Neal
Vice President for Information Services
and University Librarian

Cornell University Library

Anne R. Kenney
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July 7, 2009

Mr. Donald J. Waters
Program Officer
Scholarly Communications Program
The Andrew W. Mellon Foundation
140 East 62nd Street
New York, NY 10065

Dear Don,

I am pleased to send you the joint Cornell and Columbia University proposal *2CUL (Too Cool)* seeking $384,391 to help our libraries build a transformative and enduring partnership. This collaboration, if successful, will return savings to our respective institutions, allowing us to redirect resources to emerging needs, while at the same time improve the quality of the collections and services we offer our constituents. I expect it to attract the interest of other partners and also to serve as a model for inter-institutional partnerships.

Thank you for considering this request and for your generous counsel.

Sincerely,

Anne R. Kenney
Carl A. Kroch University Librarian

2CUL
The Columbia University Libraries/Information Services
Cornell University Library

SUMMARY

The Columbia University Libraries/Information Services and the Cornell University Library seek $384,391 for a grant project to launch an innovative partnership called 2CUL (Too Cool).

With the active support and encouragement of our university administrations, Columbia University Libraries (CUL) and Cornell University Library (CUL) are building a transformative, enduring partnership that will see a broad integration of resources, collections, services, and expertise between the two library systems. This partnership will be deep and lasting, taking advantage of a whole that is greater than the sum of its parts.

Our collaboration will return savings to our respective institutions while increasing productivity and minimizing redundant operations. It will improve the quality of collections and services offered to campus constituencies, redirect resources to emerging needs, make each institution more competitive in securing government and foundation support, and generate additional revenues. This collaboration will attract the interest of other partners, while also modeling the way that collaboration in new areas could take place in the future.

With the proposed support from The Andrew W. Mellon Foundation, Columbia and Cornell will develop and begin to implement a detailed action plan, with the long-term vision of:

- Establishing an independent service entity (2CUL) that supports both Columbia and Cornell libraries and their respective universities.
- Achieving 30% integration of operations, services, collections, and resources into 2CUL within three years.
- Reducing 15% in overall library expenses to address university budget reductions at each institution and/or to direct resources to new growth areas.
- Co-investing in critical, under-supported areas, including data curation, new media art, scholarly communication, and cross-disciplinary collaborative research.
- Increasing revenues through joint proposals for funding, new products and services, and business opportunities marketed to academic community customers.
- Developing strategic partnerships with other divisions on campus (university presses, IT, university counsel, international affairs, computer and information science departments, etc.).
- Advocating collectively within New York State, professional organizations, consortia, and in negotiation with commercial entities.
- Sharing measures for success and impact to guide our work.
- Expanding 2CUL beyond the initial partners within our respective universities, state, and the research library community.

The proposed project dates are October 1, 2009–December 31, 2011. Please note that the budget and timelines show project work from October 1, 2009–September 30, 2011, but we request a grant end date of December 31, 2011 to ensure that administrative tasks (e.g., invoice processing) can be completed within the grant timeframe.

2CUL
The Columbia University Libraries/Information Services
Cornell University Library

A. BACKGROUND

Columbia

Columbia University is an independent, privately supported, nonsectarian institution of higher education. Founded in 1754 as King's College by royal charter of King George II of England, it is the oldest institution of higher learning in the state of New York and the fifth oldest in the United States. From the beginning, the institution's goal was defined as "the Instruction and Education of Youth in the Learned Languages and Liberal Arts and Sciences." This mandate has not essentially changed, even with the transformation of King's College into Columbia, one of the world's foremost research universities.

The University is committed to preserving the quest for knowledge as more than simply a practical pursuit, through its broad range of innovative multidisciplinary programs and through the earnest exploration of difficult questions. It seeks to make significant original contributions to the development of knowledge, to preserve and interpret humanity's intellectual and moral heritage, and to transmit that heritage to future generations of students.

Columbia University Libraries/Information Services is one of the top five academic research library systems in North America. The collections include over 10 million volumes, over 100,000 journals and serials, as well as extensive electronic resources, manuscripts, rare books, microforms, maps, graphic, and audio-visual materials. The services and collections are organized into 25 libraries and various academic technology centers. The Libraries employs more than 550 professional and support staff.

The services of the Libraries extend well beyond the university. Access to digital resources is provided through the Libraries' web site (http://www.columbia.edu/cu/lweb). Onsite access to the physical collections is available to anyone affiliated with members of the SHARES program under the auspices of OCLC and of the New York Metropolitan Reference and Research Agency. The Libraries also fills thousands of interlibrary loans through cooperative arrangements with OCLC, RAPID, the Regional Medical Library Center of New York, and others.

The Libraries actively seeks support from external sources and has successfully secured funding for a wide range of projects from organizations including The Andrew W. Mellon Foundation, the Carnegie Corporation, the Getty Foundation, the Henry Luce Foundation, the National Endowment for the Humanities, the National Historical Publications and Records Commission, and the Starr Foundation.

Cornell

Once called "the first American university" by educational historian Frederick Rudolph, Cornell University represents a distinctive mix of eminent scholarship and democratic ideals. Adding practical subjects to the classics and admitting qualified students regardless of nationality, race, social circumstance, gender, or religion was quite a departure when Cornell was founded in 1865. In keeping with the founding vision of Ezra Cornell, the Cornell community fosters personal discovery and growth, nurtures scholarship and creativity across a broad range of common knowledge, and engages men and women from every segment of society in this quest.

Composed of fourteen colleges and schools with campuses in Ithaca New York, New York City, and Doha Qatar, Cornell University is the federal land-grant institution of New York State, a privately endowed university, and a partner of the State University of New York. It serves over 13,500 undergraduate and 7,300 graduate and professional school students. More than 2,900 faculty members and 11,500 staff work in the University's teaching, research, and extension programs. The intellectual climate at Cornell is greatly enriched by its long tradition of interdisciplinary work through its more than 100 laboratories, centers, and programs. Four area studies programs have been designated National Resource Centers by the U.S. Department of Education—East Asia, South Asia, Southeast Asia, and European Studies. The National Science Foundation has also designated four National Research Centers at Cornell—the Cornell High Energy Synchrotron Source, the Laboratory of Elementary-Particle Physics, the Cornell NanoScale Facility, and the National Astronomy and Ionosphere Center.

One of the leading academic research libraries in the United States, Cornell University Library is a highly valued partner in teaching, research, outreach, and learning at the university. The Library's mission is to lead the collaborative development of an academic information infrastructure that supports the changing needs of discovery, preservation, and transmission, as well as the application of knowledge, creativity, and critical thought. With an operating budget of over $50 million, Cornell University Library is organized into 20 libraries with a staff of 461 professional and support staff. The collections contain nearly 8 million printed volumes, over 90,000 current journals and serials, 72,000 cubic feet of manuscripts, and other resources in various analog and digital formats. Onsite access to these collections is open to all, and the Library fills over 60,000 interlibrary loan requests per year.

The Library has been a leader in digital research and development, building collections, developing delivery systems, and setting standards together with academic and commercial partners. Digitization and open online dissemination of public domain material is a significant priority. Beyond digitization, the Library partners with local and international scholars to create multimedia digital collections that represent important additions to scholarship in the digital humanities, performing arts, the history of technology, and other fields.

The Library receives funding for projects from both government and private organizations. These include The Andrew W. Mellon Foundation, Bill & Melinda Gates Foundation, Rockefeller Foundation, Gladys Krieble Delmas Foundation, National Endowment for the Humanities, Institute for Museum and Library Services, National Historical Publications and Records Commission, and the National Science Foundation.

Cornell University Library is a member of OCLC, RLG Programs, the Association of Research Libraries, and the Center for Research Libraries, among other organizations. It was the recipient of the 2002 Excellence in Academic Libraries Award from the Association of College and Research Libraries.

B. RATIONALE

With greater access to and acceptance of content online by faculty and students alike, unchecked annual increases in publisher prices, and emerging academic needs for digital content curation, research libraries are challenged to re-conceive their place on campus and their relationships to one another. Although libraries have collaborated on a number of fronts (cataloging, inter-library loan, advocacy), deep, highly integrated relationships have been an elusive goal. This is, in part, because research libraries learned to compete in an era when physical collections had to be held locally.

In addition, research has shown that the rate of successful collaboration is an inverse ratio to the number of players involved.[1] [2] Certainly there are models of collaboration already in place, resulting from statewide mandates (the California system), the pairing of institutions with common needs but uneven capabilities (CIC), arrangements between non-research academic libraries (the five colleges), and those developed for a specific purpose (ReCAP, Borrow Direct). But 2CUL represents a new, radical form of collaboration that pairs two leading research libraries in a voluntary, equal partnership. Columbia University Libraries and Cornell University Library are committed to building an enduring and transformative partnership that will enable us to achieve greater efficiencies and effectiveness and to address new challenges through combined forces.

Individually, each party is—and will remain—a well-respected research library. Collectively we can achieve unprecedented economic, political, and organizational clout in support of our respective institutions and higher education in general.

Certainly the current budget crisis has provided some incentive to pursue such a relationship, and advances in technology and mass digitization are rapidly minimizing constraints of distance and the value of redundant content and processes. This partnership is predicated on our commitment to reinvigorate research libraries in response to and in anticipation of how changes in digital access, interdisciplinary research, and scholarly communication are transforming the future of leading research universities.

Columbia and Cornell are co-investing heavily in this project, primarily through the contribution of staff time and expertise in all aspects of the work to be completed, but we request the

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[1] Caroline Haythornthwaite, Karen J. Lunsford, Geoffrey C. Bowker, Bertram C. Bruce, "Challenges for Research and Practice in Distributed, Interdisciplinary Collaboration," Chapter VII, *New Infrastructures for Knowledge Production, Understanding E-Science,* by Christine Hine, 2006
[2] Sara Kiesler and Jonathon N. Cummings, "What Do We Know about Proximity and Distance in Work Groups? A Legacy of Research on Physical Distance," Chapter 3. In P. Hinds & S. Kiesler (Eds.), *Distributed Work* . Cambridge: MIT Press.

following support from The Andrew W. Mellon Foundation to bring much-needed external advice and support to our deliberations.

Third-Party Guidance. We see the need for a respected, neutral, third party to manage the development and scope of this partnership, create a work plan, establish milestones and timelines, push agendas forward, raise issues and identify tensions to be resolved, support decision-making, facilitate meetings, keep staff at both institutions on track, conduct market research, negotiate with consultants and commercial entities, develop governance models, build communication and evaluation strategies, and represent the interests of the collective to internal and external constituents. We have chosen Ithaka Strategic Services to fulfill this role.

Data Mining and Analysis. It is clear from work to date that there are major gaps in comparative data to support our efforts. We must also build new metrics to measure progress toward goals and assess impacts on our two universities, as well as grapple with institutional versus collective identities. Third-party consultants, to be determined based on recommendations from trusted colleagues from ARL libraries, will be hired to conceive of required measures to assess project actions as well as an infrastructure to store, manipulate, and mine data to sustain decision-making related to 2CUL. The project requires a wide range of pre-, during, and post-implementation data—for example, analysis on university program strengths and weaknesses and associated library needs, deep collection development and usage patterns, library workflow and cost dimensions, a scan for available data sources to support such analysis, market research for turn-key products that support data storage, manipulation and ad hoc report generation, implementation team target and progress data, and post-implementation outcome measures.

Governance, Business Planning, and Legal Framework. The areas of governance, business planning, and the legal framework for the 2CUL initiative will be important as planning and work proceed from project to program. Ithaka, through its larger consultation, will provide guidance in these areas. We also plan to engage consultants late in the first year and throughout the second year to guide the two universities in the development of detailed strategies in these areas, which will be used to involve the budget and legal offices at both universities.

Video Conferencing and Travel. The senior leadership and the various investigative groups must maintain close contact, requiring face-to-face meetings and the establishment of virtual communication capabilities at both libraries.

C. PROJECT DESCRIPTION

Columbia University is submitting this proposal to The Andrew W. Mellon Foundation as the prospective prime grant recipient, with Cornell University as a subawardee. However, both universities are equal partners. This decision was made to facilitate coordination of grant administration and reporting.

The objective of this project is to lay the foundation for a permanent integration between the Columbia University Libraries (CUL) and the Cornell University Library (CUL). We do not envision that the two research libraries will be merged into one. Rather, by the end of the grant

period, we expect to establish an independent service entity (2CUL) that supports both Columbia and Cornell libraries and their respective universities. This new entity will be supported by both library systems, with a goal of achieving 30% integration of operations, services, collections, and resources within three years. The expectation is that this new entity will result in enhanced production capabilities, a reduction in overall library expenses, and greater access to critical collections and services than is possible at either Columbia or Cornell alone.

We also intend to co-invest in critical, under-supported areas, including data curation, new media art, scholarly communication, and cross-disciplinary collaborative research. Within our respective universities, we expect to develop strategic partnerships with other divisions on campus, such as the university press, information technology units, and the like. Beyond the scope of this project, but very much under consideration, is the expansion of 2CUL beyond the initial partners within our respective universities, state, and the research library community.

Initial Areas to Investigate

We have identified three key areas to initially explore:

1. Technical Services
2. Global Resources/Area Studies
3. Technology Infrastructure

We have identified these three areas for initial focus because they represent priority activities at both institutions, areas with substantive and complementary strengths for which new or replacement investments are now needed. These are arenas of opportunity and active candidates for co-investment. Our investigations have advanced substantially beyond the initial conversations. Planning teams and working groups are now organized to focus on acquisitions and cataloging (including a shared library management system), on global resources staffing and services, and on digital asset management and preservation systems. Commitments on shared staffing, technologies, and resources are already being discussed, and conversations have already been launched with Library Management System vendors on the development needed for a shared system for research libraries.

To address these three areas, we have created three "Investigative Groups" from each institution. Each Investigative Group will be chaired by a member of the Senior Management Group. Please see details under *Project Oversight and Personnel.*

The purpose of the Investigative Groups is to develop specific 2CUL plans for integration, collaboration, and co-development. These groups will work within their institutions and will also work with their Cornell/Columbia counterpart group to discuss, consult, and plan. They will call on other staff in the organization where appropriate. For each key initiative (Technical Services, Area Studies, and Technology Infrastructure), the Columbia and Cornell chairs will provide joint leadership.

1. Technical Services (Acquisitions, Cataloging, Electronic Resource Management, Data Management)

Cornell and Columbia have demonstrated leadership and innovation both within our own organizations and through significant contributions to the broader profession. Each has followed different development trajectories that offer great potential for achieving complementary, bold, and much-needed new service models and the processing tools to meet them.

Following is the preliminary planned timeline for the Technical Services Investigative Group:

Summer 2009 (Before the Grant Period)

- Conduct two conference calls to review current workflows and identify likely areas for collaboration and consolidation.

- Exchange information on suppliers currently used for library materials from all world regions and on sources of bibliographic records.

- Exchange information on language and subject expertise of technical services staff.

October 2009–March 2010 (Year 1)

- Conduct two in-person Columbia/Cornell group meetings.

- Gain familiarity with each institution's current methods for acquiring, describing, and managing print and electronic collections.

- Test the feasibility of applying common scripts to process and load records from external data sources and explore the potential for centralizing this activity at one institution.

- Collaborate on testing the expected new cataloging code, Resource Description and Access; a common understanding and application of these rules will be needed in order to share cataloging responsibilities for each other's collections.

April 2010–September 2010 (Year 1)

- Conduct two in-person Columbia/Cornell group meetings.

- Begin to test models for shared ordering, receiving, cataloging, and processing of print collections. The Voyager system used by both Columbia and Cornell offers limited possibilities for extensive integration. Thus, the group will simultaneously test models within those limits and develop a detailed understanding of the functional requirements that would allow more complete integration of activities.

- Promote requirements to developers of new systems for library management, such as the Open Library Environment (OLE), ExLibris' Unified Resource Management system, and the initiative recently announced by OCLC.

- Initial explorations within the current Voyager systems may include: transfer of funds

between institutions to allow all materials for a chosen language to be ordered, received, and processed by one partner; ordering by a single partner within an external system (such as WorldCat Selection or a book vendor's system) with further processing taking place separately; sharing records of new acquisitions to allow one partner to catalog both libraries' holdings on OCLC; and similar combinations.

October 2010–March 2011 (Year 2)

- Conduct one in-person Columbia/Cornell group meeting.

- Assess benefits and deficiencies of processing models tested.

- Refine and further test the most promising models to inform the further development of functional requirements for a joint, shared system.

April 2011–September 2011 (Year 2)

- Conduct one in-person Columbia/Cornell group meeting.

- Explore models for shared management of licensed electronic resources, including: cross-institutional licensing, centralized proxy server management, shared knowledge-base updating for link resolution and federated searching, and shared responsibility for resolving problem reports.

2. Global Resources/Area Studies

2CUL will develop a joint program for identifying, purchasing, and managing world class collections of global resources. We held a series of March and April discussions (via e-mail, telephone, and face-to-face) between area studies selectors from both institutions to determine collecting and technical services strengths and weakness for several collecting areas—including Africa, China, Japan, Korea, Latin America, Middle East, Slavic-Russia-Eastern Europe, South Asia, and Southeast Asia.

The purpose of these discussions was to identify collecting areas most amenable to joint collection building/management and service provision. We identified <u>Slavic-Russia-Eastern Europe</u> and <u>Latin America</u> as the two collecting areas to proceed with first, based on collection strengths at both institutions and on our current staffing situations (retirement/attrition/ recruitment needs). We outlined provisional collaborative staffing and funding models for these two areas. These models will serve as examples for the next areas we address, which will be China, Korea, Japan, South Asia, and Southeast Asia.

These collaborative models will be developed to support each of these areas based on the respective capacities and academic program strengths at both institutions. In some areas, one library may assume primary responsibility for all aspects of collection building and management. In other areas, it is likely that sub-divisions of responsibility will apply (by region, language, or format) where one institution might take the lead and relieve the other of collecting as heavily or

at all in that area. There may also be a division of labor in which one institution takes primary responsibility for acquisitions while the other focuses efforts on the technical processing of materials.

In all of these arrangements, it will be critical to address issues of collective ownership, degree of redundancy in local collections, reconciliation between institutional financial systems, public service/liaison activities bridging two institutions, materials delivery, enhanced user privileges for faculty and students of both institutions, and issues surrounding accreditation and other external affiliations. 2CUL may also investigate collaborative arrangements with research libraries located in these areas of the world to negotiate competitive pricing, manage vendor relationships, and obtain cataloging metadata along with the content.

Following is the preliminary planned timeline for the Global Resources/Area Studies Investigative Group:

Summer 2009 (Before the Grant Period)

- June/July conference calls: Discuss joint collection building/management and service models for Slavic-Russia-Eastern Europe and Latin America to investigate the scope of current and future collecting and service needs.

- Analyze collecting (approval plans, firm ordering, etc.) and service activities (faculty and student liaison, reference, instruction, etc.) for Slavic-Russia-Eastern Europe and Latin America to determine relative costs for the collaborative staffing and the funding models under consideration.

October 2009–March 2010 (Year 1)

- Conduct two in-person Columbia/Cornell group meetings.

- Create and test collaborative collection building/management and service models for the two collecting areas (Slavic-Russia-Eastern Europe and Latin America).

- Consult faculty and student user groups at both institutions for the two collecting areas: conduct needs assessment and align prospective collaborative collection building/management and service models with user needs.

- Develop plans and timelines for implementation and assessment.

April 2010–September 2010 (Year 1)

- Conduct two in-person Columbia/Cornell group meetings.

- Investigate collaborative arrangements with research libraries located in these areas of the world to negotiate competitive pricing, manage vendor relationships, and obtain cataloging metadata along with the content.

- Investigate collaborative arrangement with the Center for Research Libraries (CRL) for the

two collecting areas.

- Develop plans and timelines for implementation and assessment, if appropriate.

October 2010–March 2011 (Year 2)

- Conduct one in-person Columbia/Cornell group meeting.

- Conduct similar analyses for other collecting areas with emphasis on Korea, South Asia, and Southeast Asia.

- Develop plans and timelines for implementation and assessment, if appropriate.

April 2011–September 2011 (Year 2)

- Conduct one in-person Columbia/Cornell group meeting.

- Evaluate the developed collaborative collection building/management and service models for possible extension to other collecting activities such as shared e-book collecting or a more general extended collaborative collection building effort with Borrow Direct partners.

- Develop plans and timelines for implementation and assessment, if appropriate.

3. Technology Infrastructure

There are a number of areas where technology efforts at the two institutions complement each other and where there are significant opportunities for co-investment, division of labor, and mutual support. Both libraries are developing Fedora-based digital archiving solutions, with the goal of migrating existing DSpace repositories and other silo repositories into new institutional Fedora repositories. 2CUL will enable the design of common repository infrastructures, allowing the institutions to share system architectures, tools, and services.

Both partners are also exploring new discovery/access solutions, based on a combination of open-source tools and joint development. We will investigate opportunities for joint investment in vendor licenses and in hardware and software in order to limit costs and extend capacity.

A major challenge in developing strong, shared technology infrastructures is that the existing processes, workflows, tools, and services are not mature. It is not just a question of combining existing efforts and reducing duplication, but of jointly solving new problems in a very dynamic technology environment. For each infrastructure challenge, 2CUL must explore the balance between meeting local needs and building single solutions that can support both institutions. Where general solutions are possible, they may serve as models or even code distributions for other research libraries.

Following is the preliminary planned timeline for the Technology Infrastructure Investigative Group:

Summer 2009 (Before the Grant Period)

- Conference calls: Fedora developers will share knowledge and skills and explore ways that our Fedora-based digital archiving development can be coordinated and co-developed.

- June video conference: Explore each institution's current thinking about next generation search and discovery. In an April 2009 meeting, the Senior Management Groups determined that a shared discovery system is highly desirable. Participants in this call will include members of the Senior Management Groups and other appropriate staff, looking at this issue from public services, technical services, and infrastructure perspectives.

- July in-person meeting: Review all significant technology initiatives at each institution and identify fruitful areas for collaboration and sharing.
  - As examples, potential areas that we have already identified for discussion include web curation, research data curation, and a possible DuraCloud digital preservation pilot with the newly formed DuraSpace organization, using their cloud-based services as one component of an overall preservation solution for both institutions. Cornell has already begun several efforts in data curation (e.g., DataSTaR, DISCOVER, and the JHU Datanet partnership), and Columbia is planning to learn from and build on these efforts to address its own data curation challenges. Columbia, on the other hand, is much farther along in dealing with web curation, supported by a grant from the Mellon Foundation, which is an area of significant interest for Cornell.

October 2009–March 2010 (Year 1)

- Conduct two in-person Columbia/Cornell group meetings.

- Assess and develop a plan and timeline for proceeding.

- Focus collaborative efforts in the following areas:
  - Content models: In-depth review of Fedora content models at both institutions to identify potential areas of joint-content model design and/or harmonization. Determine feasibility of using and managing common and/or harmonized content models.

  - Columbia Fedora Cataloging Client (Hypatia): Make Hypatia application version 1 available to Cornell for testing and assessment. Determine whether Hypatia is a candidate for joint development and/or whether Cornell would use it as such and provide input to its further development at Columbia.

  - Search and discovery for digital collections/institutional repositories: Ongoing in-depth review of existing models for search and discovery within and across collections. Joint review of CULView, Cornell's Fedora-based network-overlay access and discovery system for organizing and consolidating disparate repositories.

  - Long-term archive: Review existing approaches to preservation-level digital storage, including preliminary review of national/international best practices; identify existing data formats used at both campuses for possible coordination of data preservation techniques, including one-time and dynamic data migration, format documentation and preservation, and tools acquisition and application. Begin discussions with Duraspace on

using DuraCloud as a component of a long-term digital storage solution.

- o Institutional repository and scholarly support platform: Continue to communicate about evolving scope and functionality for respective Columbia and Cornell institutional repository and scholarly support platforms; determine whether planned components of this could be shared/jointly developed.

- o Application development: Set up mechanisms for regular communication about other planned and proposed application development around the Fedora platform. Ongoing review of each institution's planned and existing Fedora-based applications.

April 2010–September 2010 (Year 1)

- Conduct two in-person Columbia/Cornell group meetings.

- Focus collaborative efforts on:

- o Columbia Fedora Cataloging Client (Hypatia): Continue with either joint or consultative development. (Version 2+ to include, e.g., capacity for manual metadata/content aggregations, loading and use of format schemas beyond MODS). If joint development, set up project management infrastructure needed for joint software development.

- o Institutional repository and scholarly support platform: Continue to communicate about evolving scope and functionality for respective Columbia and Cornell institutional repository and scholarly support platforms; determine whether planned components of this could be shared/jointly developed.

- o Cornell Network-Overlay Discovery and Access System (CULView): Continue work on joint specification and design of initial CULView prototype. Begin implementation at one or both institutions. Ongoing review of applicability of CULView solution at both institutions.

- o Long-term archive: Begin to apply common approaches towards preservation best practices; share tools and techniques as needed. Determine how far collaboration in operational and policy infrastructure could be shared. Begin to explore approaches to interoperability between preservation repositories. If Duracloud approach appears promising, begin initial pilot implementation with DuraSpace.

- o Application development: Ongoing review of each institution's planned and existing Fedora-based application development efforts; establish decision points to determine degree of collaboration on each.

- o Web and data curation: Begin overview and discussion of common technical solutions in the areas of web site and research dataset curation, building on Cornell's existing DataStaR project and Columbia's work on human rights web site curation and preservation.

October 2010–March 2011 (Year 2)

- Conduct one in-person Columbia/Cornell group meeting.

- Focus collaborative efforts on:
  - Metadata: Review and assess digital collection/scholarly content metadata practices at both institutions; develop joint consulting/communication about new or difficult metadata challenges.

  - Institutional repository and scholarly support platform: Continue to communicate about evolving scope and functionality for respective Columbia and Cornell institutional repository and scholarly support platforms; determine whether planned components of this could be shared/jointly developed.

  - Cornell Network-Overlay Discovery and Access System (CULView): Release initial production version of CULView for testing at one or both institutions.Analyze potential for joint search and discovery to provide better service to patrons at lower overall operating cost. Explore use of ORE and resource map technology and possible points of collaboration.

  - Long-term archive: After testing new practices in existing LTA, work together to determine next steps required to enhance and improve preservation and access to digital collections stored in LTA. Plan specific repository interoperability test. Assess feasibility and cost of jointly operated long-term digital archive. Potentially include DuraCloud as part of LTA solution set.

  - Web and data curation: Continue development of common technical solutions in the areas of web site and research dataset curation, building on Cornell's existing DataStaR project and Columbia's work on human rights web site curation and preservation.

April 2011–September 2011 (Year 2)

- Conduct one in-person Columbia/Cornell group meeting.

- Focus on continued development of solid technology collaboration mechanisms where these have proved to be useful.

- Develop plan for deepening collaboration in period following current grant

- Develop cost/benefit models for various kinds of inter-institutional collaborations.

- Identify specific technology initiatives undertaken or planned during the grant period that could be candidates for further targeted fundraising.

- Disseminate results of project technology collaborations via papers and presentations as appropriate.

Other Potential Areas for Investigation

In addition to these three areas, other opportunities for collaboration will emerge over the next two years. Although these ideas are unlikely to be developed within the scope of the grant period, they have great potential to flourish under the new partnership. For instance, both schools support medical libraries in New York City—are there possibilities for pooled collection building and the development of a shared medical informatics program? Similarly, the respective law libraries are already discussing collaboratively building international legal collections.

Second, research libraries increasingly face a myriad of legal issues, from IP to fair use, privacy to contractual arrangements—yet they lack in-house expertise and must rely on the university's general counsel, which may not have a full appreciation of library concerns. We would explore the possibility of using the internationally renowned expertise of Kenneth Crews, Director of the Copyright Advisory Office at Columbia, and Peter Hirtle, Cornell's Chief Intellectual Property Officer, to offer consulting services to other research libraries. The goal would be to assist libraries to track developments in the field and better understand legal issues in order to make their interaction with their own legal counsel more productive.

A third possible collaboration could be in the area of information fluency. Cornell's Vice Provost for Undergraduate Education, Michele Moody-Adams, is moving to Columbia to assume a similar post. Moody-Adams and the Cornell University Library have co-sponsored the Cornell Undergraduate Information Competency Institute (http://infocomp.library.cornell.edu/), now in its second year. The Institute encourages Cornell faculty to explore ways to engage students by integrating research skills into the classroom and the curriculum through the redesign and creation of assignments for undergraduate courses. Moody-Adams has been briefed on 2CUL and intrigued by this possibility.

We also see opportunities for building a shared preservation program, collectively addressing issues of graduate student attrition rates, joint negotiations with publishers and commercial entities, and for enhancing access arrangements between Ithaca and New York City, including digitization on demand, print on demand, and expedited document delivery.

Project Oversight and Personnel

At Columbia, James G. Neal, Vice President for Information Services and University Librarian, will direct the project. Jim Neal provides leadership for university academic computing and a system of 25 libraries. His responsibilities include the Columbia Center for New Media Teaching and Learning (CCNMTL), the Center for Digital Research and Scholarship, the Copyright Advisory Office, and the Center for Human Rights Documentation and Research. He participates on key academic, technology, budget, and policy groups at Columbia University. Previously, he served as the Dean of University Libraries at Indiana University and Johns Hopkins University, and he held administrative positions in the libraries at Penn State, Notre Dame, and the City University of New York.

At Cornell, Anne R. Kenney, the Carl A. Kroch University Librarian, will direct the project. As the chief academic and administrative officer of the university's extensive library system,

Kenney serves on the Provost's Deans Council, which sets academic policy for the university. She oversees a complex organizational structure that brings together 20 libraries including those serving endowed colleges/schools, statutory colleges/schools, and professional schools. Kenney is known internationally for her pioneering work in developing standards for digitizing library materials and digital preservation. She is the co-author of three awarding-winning monographs and over 50 scholarly articles and reports.

The project team includes a Senior Management Group and three "Investigative Groups" from each institution. Each Investigative Group will be chaired by a member of the Senior Management Group.

The Senior Management teams from each institution, led by Jim Neal and Anne Kenney, will develop and guide the 2CUL initiative in close consultation with Ithaka Strategic Services. They will work with Ithaka to define milestones and metrics for success, review the project plans for the three key areas, and evaluate progress toward defined goals. The Senior Management Groups will meet in person three times a year and will otherwise communicate by video and phone conference calls and the 2CUL wiki.

Ithaka will be asked to participate in key meetings of the Investigative Groups, to review and comment on the work of the groups, and to assist in communicating across the 2CUL initiative. Ithaka's project management role will be key to keeping the work of the three groups on track and on target.

Columbia

Columbia Senior Management
- James G. Neal, Vice President for Information Services and University Librarian
- Patricia Renfro, Deputy University Librarian and Associate Vice President for Digital Programs and Technology Services
- Kristine Kavanaugh, Associate Vice President for Finance, Administration, and Human Resources
- Robert Wolven, Associate University Librarian for Bibliographic Services and Collection Development
- Damon Jaggars, Associate University Librarian for Collections and Services

Columbia Technical Services (Investigative Group)
- Robert Wolven, Associate University Librarian for Bibliographic Services and Collection Development (Chair)
- Ilona Bicsak, Director, Monographs Processing Services
- Kate Harcourt, Director, Original Serial and Monograph Cataloging
- Irina Kandarasheva, LC Cataloging Unit Librarian
- Joyce McDonough, Director, Technical Support & Acquisitions
- Matthew Pavlick, Library Specialist
- Mark Wilson, Librarian, Precataloging Unit & Eurasian Cataloger

Columbia Global Resources/Area Studies (Investigative Group)
- Damon Jaggars, Associate University Librarian for Collections and Services (Chair)
- Robert Davis, Russian, Eurasian & East European Studies Librarian
- Pamela Graham, Director, Area Studies Library Services
- Open, Latin American & Iberian Studies Librarian
- Open, Director, Starr East Asian Librarian

If, during the project period, the implementation extends to additional collecting areas, the respective bibliographers will join the group.

Columbia Technology Infrastructure (Investigative Group)
- Patricia Renfro, Deputy University Librarian and Associate Vice President for Digital Programs and Technology Services (Chair)
- Ben Armintor, Systems Analyst/Programmer
- Gary Bertchume, Senior Library Systems Analyst
- Robert Cartolano, Libraries Information Technology Office Director
- Stephen Davis, Director, Columbia Libraries Digital Program
- Janet Gertz, Director, Preservation and Digital Conversion
- Rebecca Kennison, Director, Center for Digital Research and Scholarship
- James Stuart, Systems Analyst/Programmer

Cornell

Cornell Senior Management
- Anne R. Kenney, Carl A. Kroch University Librarian
- Lee Cartmill, Associate University Librarian for Administrative Services
- Dean Krafft, Chief Technology Strategist
- Xin Li, Assistant University Librarian for Strategic Initiatives
- Janet McCue, Associate University Librarian for Teaching, Research, Outreach, and Learning Services
- Oya Rieger, Associate University Librarian for Information Technologies
- John Saylor, Associate University Librarian for Scholarly Resources and Special Collections
- Edward Weissman, Assistant to the University Librarian
- Scott Wicks, Associate University Librarian for Central Library Operations

Cornell Technical Services (Investigative Group)
- Scott Wicks, Associate University Librarian for Central Library Operations (Chair)
- Adam Chandler, Database Management & E-Resources Librarian
- Barbara Eden, Director of Preservation and Collection Maintenance
- William Kara, Head, E-Resources & Serials Management
- Jesse Koennecke, Electronic Resources Librarian
- Jim LeBlanc, Head, Database Management
- Boaz Nadav-Manes, Head, Monographic Acquisitions
- Open, Head, Cataloging Services

Cornell Global Resources/Area Studies (Investigative Group)
- John Saylor, Associate University Librarian for Scholarly Resources and Special Collections (Chair)
- Bronwen Bledsoe, Curator, South Asia Collection
- Gregory Green, Curator, Echols Collection on Southeast Asia
- Dan McKee, Japanese Bibliographer
- Kizer Walker, Assistant to the Associate University Librarian for Scholarly Resources and Special Collections
- Liren Zheng, Curator, Wason Collection on East Asia

If, during the project period, the implementation extends to additional collecting areas, the respective bibliographers will join the group.

Cornell Technology Infrastructure (Investigative Group)
- Dean Krafft, Chief Technology Strategist (Chair)
- Jon Corson-Rikert, Head, Information Technology Services, Mann Library
- David Fielding, Programmer/Analyst Specialist
- William Kehoe, Programmer/Analyst Specialist
- Martin Lessmeister, Programmer/Analyst Specialist
- Oya Rieger, Associate University Librarian for Information Technologies
- Simeon Warner, Director, Application Development
- Frances Webb, Programmer/Analyst Specialist
- Miles Worthington, Interface Designer

Consultants: Ithaka Strategic Services

After considering other potential consultants, we have chosen Ithaka to fulfill this role. We recognize the importance of a third party bringing the requisite expertise to the table, including an appreciation for the role of leading research libraries in the academy. Equally crucial is the reputation of the third party, a sense of trust in their ability to remain impartial and to support the collective effort, and their ability to commit the level of time and effort needed for 2CUL to succeed.

The principal investigators rejected the idea of considering consulting firms that lacked an understanding of academic mission and research libraries. We considered several firms and individuals who have consulted for research libraries, including consultants such as Maureen Sullivan, library consulting firms like R2 Consulting, and general business consulting firms that have worked in higher education, including McKinsey, Ernst and Young, and Gartner. All of these were evaluated as lacking sufficient depth of understanding or experience in working with research libraries and breadth of expertise to facilitate and enable the complex 2CUL planning process. The combination of qualities needed—process facilitation skills, research capacity, market analysis experience, understanding of research libraries, integrity in the research university community, knowledge of not-for-profit governance and legal issues, and substantive visibility and trust in the academic library community—narrowed the field.

The Council on Library and Information Resources and the Center for Research Libraries were

also considered, but in neither case did their experience and expertise address the priority criterion. Neither organization is well positioned to provide the sustained and comprehensive support needed for the 2CUL planning process. Moreover, the missions of the two organizations are directed at other objectives; in the case of CLIR, on expanded access and preservation of information, and in the case of CRL, on cooperative programs that provide reliable access to unique and unusual collections. Both missions represent essential goals for the research library community, but do not provide the management, research, and process expertise needed in the 2CUL consultant.

Further, we rejected the idea of hiring a full-time project manager because the range of expertise needed cannot be found in one person. Effecting change at the institutional level is difficult; attempting this across two successful, well-respected institutions will be especially challenging. The range of expertise needed includes:

- Project management—demonstrated success in managing a high-profile and risk-filled library project from conception through implementation.

- Meeting facilitation—experience and earned trust in bridging cultural differences across two large libraries and institutions, resolving conflicts, and bringing to the table key issues and multiple perspectives. Clear definition of roles for project partners and facilitators is also required.

- Milestones and metrics for success—ability to develop clear, shared measures against which to evaluate the success of the 2CUL collaboration, including integration of operations, services, and resources; cost-savings and new-revenue generation; and co-investment in new areas.

- Work plan development—experience in translating agreed-upon milestones and success metrics to a detailed work plan to ensure that the 2CUL partners make steady progress towards project deliverables by completing intermediate steps on time.

- Governance structure—in collaboration with 2CUL senior leadership, define and establish decision-making procedures and governance structures.

- General consulting and advisory services—specifically to advise on the business plan and to establish a communications planning process to secure the support of a diverse group of internal and external stakeholders.

- Organizing research—to address issues raised in the project implementation, such as faculty needs/preferences and existing models for library collaborations.

- Providing an outside perspective—asking provocative questions and challenging the 2CUL team to think through new angles and to consider new approaches to issues critical to success.

Some of this work is very high level, and it will be critical that the third party has vast experience and is well known in the profession. Some of the work is lower level, but requires dedication and follow-through. Ithaka can provide this range of third-party support, with the involvement of four individuals. By contracting with Ithaka, we are able to match the talent with the requirement.

Ithaka has deep ties to the university community in general—and to libraries in particular—that gives it the necessary context and background to contribute meaningfully to 2CUL's work. These ties have been established through Ithaka's consulting work with library clients and organizations such as Fedora that serve library needs, through the professional backgrounds of its leadership, and through collaboration with the community related to Ithaka's JSTOR and Portico divisions.

Ithaka Strategic Services and Research units have engaged in extensive research into factors impacting libraries today, from current models of digital scholarship, to large-scale surveys of faculty behavior, to trends in the migration from print to digital publication and preservation—issues that are sure to be faced by 2CUL. Ithaka representatives attend most major library meetings and are often asked to speak at national and regional conferences. Librarians serve on Ithaka's advisory boards, and the organization has an extensive informal network of librarians to consult about challenges and developments within the library community.

Ithaka also brings significant experience addressing the sustainability of digital resources and services, having developed business plans for a variety of clients. Ithaka's 2008 report *Sustainability and Revenue Models for Online Academic Resources* proposed a general framework for thinking about sustainability, and Ithaka is about to publish a second phase of this research including findings from twelve in-depth case studies of digital resources. Ithaka's experience with project management—in particular multi-organization collaborations—will also help guide the 2CUL collaboration and keep it on track. Finally, Ithaka has deep experience in the diverse sorts of research—from desk research, to qualitative interviews, to surveys and critical analysis—that can provide unique and essential information in support of new projects. Please see the appendices for the proposal from Ithaka to perform this work, which includes a description of services and deliverables.

Ithaka strives to provide objective and insightful market research and business planning advice to clients. Ithaka's structure includes three distinct divisions: JSTOR, Portico, and Ithaka Strategic Services and Research. Maintaining objectivity is fundamental to the success of the work of Strategic Services. In the course of some projects, questions about a potential role for JSTOR or Portico may arise. In these cases, Ithaka Strategic Services may include JSTOR or Portico in a list of options for the project to consider, but would not participate in any negotiations or decisions involving these other Ithaka divisions.

The only exceptions to this arms-length relationship involve consulting projects where the client has already chosen JSTOR or Portico as the service provider and specifically asks for help with product or business development, and projects where JSTOR or Portico have engaged Ithaka Strategic Services to help with market research or business planning.

Ithaka Strategic Services treats all project-related documents and communications as confidential unless directed otherwise by the client, so no privileged information would be shared across division lines. While Eileen Fenton, Executive Director of Portico, will be involved with the 2CUL project because of her experience both with the university library community and with

large-scale digital initiatives, she will not participate in discussions relating directly to selection decisions about preservation solutions.

By clearly communicating the role of Ithaka Strategic Services in the 2CUL project and by maintaining transparency, Ithaka strives to avoid conflicts of interest (or the appearance thereof). The set of roles and boundaries described above will be codified in the contract between Ithaka and 2CUL and will serve as a guide to areas of engagement during the project.

Ithaka's staff for 2CUL will include:

- Kevin Guthrie, Ithaka President
- Laura Brown, Ithaka Senior Advisor
- Eileen Fenton, Portico Executive Director
- Kirby Smith, Ithaka Strategic Services Analyst

Kevin, Laura, and Eileen all bring experience in the leadership of non-profit organizations. Kevin has worked closely and collaboratively with the library community to build services and products such as JSTOR, Portico, and Ithaka that forge new ground in scholarly communications and offer innovative, trusted solutions for libraries. His entrepreneurial savvy, management skills, and community knowledge will provide valuable insights into the strategic and practical questions facing this collaboration. Laura brings a long history of management experience in scholarly publishing. She helped Oxford University Press USA change its systems and structures to make the transition to digital publishing, and she built new transatlantic work teams to create products such as Oxford Reference Online that broke down organizational and geographical silos to drive innovation. Laura now leads the Strategic Services team at Ithaka. Her work with developing strategic and operational plans for new initiatives will contribute expertise in business planning and project management. Eileen's experience as executive director of Portico brings an extensive background in developing community-driven solutions in support of the mission of academic libraries and experience with technology infrastructure. Kirby, an analyst with Ithaka, has significant experience with research and analysis related to strategic planning for digital projects, and will also contribute her background in project management to the effort.

Laura and Eileen will be responsible for overseeing this work, together devoting two days a month to the project. Laura will serve as the principal point of contact for high-level issues and will be the primary advisor for issues relating to landscape/market research and business planning. Eileen will provide high-level guidance on internal and external communications planning, and will act as an internal sounding board for issues relating to library organization and technical infrastructure. Laura and Eileen will provide input into the development of project success metrics, milestones, and governance structures, and they will be available to facilitate meetings and provide input to sub-groups as desired.

For the duration of the project, Laura and Eileen will also represent the interests of the emerging 2CUL enterprise, when needed, contributing insights and feedback not grounded in either the Cornell or Columbia perspective. Kevin will provide significant input into project deliverables and will be available for participation in key meetings as appropriate; we estimate he would devote half a day per month, on average, to the project.

Kirby will have responsibility for the day-to-day management of this engagement and will be the point-person for operational project communications. She will contribute substantially to research and deliverables, supporting the work of the project leads through tasks such as outlining, drafting, and refining key documents and deliverables, and conducting background research and preliminary analysis on a variety of topics. She will also develop and manage the project work plan and will provide support for the coordination and preparation of major meetings. She will spend an estimated five to six days a month on this work.

Consultants: Data Mining and Analysis (To Be Decided)

It is clear from work to date that there are major gaps in comparative data to support our efforts. We must also build new metrics to measure progress toward goals and assess impacts on our two universities, as well as grapple with institutional versus collective identities.

Within the first six months of the first year, third-party consultants, to be determined based on recommendations from trusted colleagues from ARL libraries, will be hired to develop measures to assess project actions as well as an infrastructure to store, manipulate, and mine data to sustain decision-making related to 2CUL, in particular as they relate to the three key areas to be investigated.

The project requires a wide range of data. For example, pre-implementation analysis on university program strengths and weaknesses and associated library needs will help implementation teams to determine which future business model to employ. Deep data on collection development and usage patterns will support decisions on future collection location and delivery services. Library workflow and cost dimensions data will help determine where to place a particular service to gain efficiency while maintain high-quality user service. An inventory of the available data sources will help design a system that warehouses the data for mining, and market research for products will help 2CUL to determine whether we can buy, license, or must build such a system. During implementation, team targets and progress data will help the project stay on course.

Post-implementation outcome measures will reveal areas for change. We hope to collectively develop a set of key indicators to measure the overall 2CUL performance, from the perspectives of users, library internal processes, financial sustainability, and growth. All the data mining work will be done in close coordination with Ithaka as it dovetails with the project milestones Ithaka will develop.

Tasks to be accomplished include:

1. Define a set of data 2CUL must have in order to implement the partnership in the three areas successfully (e.g., in-depth collection strengths comparison, workflow analysis, stakeholder needs analysis).
2. Define a set of data 2CUL must have to measure project progress.
3. Define post-implementation outcome measures in the three areas.
4. Design a workflow/system to collect needed data under 1-3.
5. Define a system to warehouse the data for the initial three areas, plus capability to expand

the data types and sets, and the key functions to support future mining.
6. Define key responsibilities to maintain such a system.
7. Conduct pre-implementation data analysis, such as extracting data from various sources.
8. Produce and present reports for Investigative Groups.
9. Conduct modeling and test runs.

So far, four candidates have been recommended by ARL colleagues. They are: Carol Tenopir (collection analysis experience), Raynna Bowlby (organizational development consultant with library experience), Laura Downing (Harvard MBA consultant with specialization in developing Strategy, Measures and the Balanced Scorecard), and Joe Zucca (library data farm experience). 2CUL is still in the stage of gathering recommendations and will proceed to interviewing and determining the consultants. Xin Li, Cornell, will serve as the 2CUL lead with the data mining and analysis consultants.

Consultants: Governance, Business Planning, Legal Framework (To Be Decided)

It will be critical for the advancement of 2CUL to extend early attention to governance, business planning, and legal matters. We will need to define relationships, roles, and the processes through which goals and priorities are established, decisions are made, resources are allocated, power is wielded, plans are accomplished, and progress is measured.

Ithaka will guide the development of models for decision-making, long-term budget planning, and the legal structures to enable the shared 2CUL organization. As part of its work, Ithaka will research and define a range of options in these areas.

We determined that it is essential to then engage separate consultants to assist with evaluating the models that Ithaka develops. These consultants will help the two institutions assess the advantages and disadvantages of these options. They will also translate the models into detailed strategies for presentation, explanation, and implementation with the administrations of Cornell and Columbia, in particular the legal and finance offices. If each institution's Counsel's Office is brought in "cold," their response is likely to be to protect their own institution's turf. This is analogous to having our intellectual property experts (Kenny Crews, Peter Hirtle) think through legal issues from the Library's perspective before involving each university's Counsel's Office.

The business and legal consultants will also assist in advancing to a plan in the context of the institutional and New York State standards and requirements. The legal consultant must be knowledgeable about the creation of not-for-profit organizations involving universities in New York State.

Consultants have not yet been contacted for these assignments, but one strong candidate would be George Jurkowich at Azimuth Consulting, who has worked extensively and successfully in the library organization and research library communities on business and governance planning. His strengths are in the financial and organizational planning arena. George Jurkowich is not a lawyer, but he has substantial experience assisting groups looking to build or integrate organizations to identify the key legal requirements and options and to be prepared to engage legal staffs in moving to drafting and negotiation of new legal structures and processes. Please

see more about his experience in the appendices. An additional legal consultant, to be identified in collaboration with the counsels at the two universities, will work to translate this research and guidance into a detailed legal plan.

The planning process and the legal and governance framework must address shared decision-making and the enforcement of those decisions. There are several models around the United States and Canada where institutions in the educational and cultural sectors have come together to jointly invest and administer areas of common interest to produce efficiencies, manage resources, and advance shared goals. These models will be investigated and evaluated.

The governance model must involve the universities, not just the libraries. Provisions must be made for later consideration of additional universities that may join 2CUL as full partners or affiliates. There will be assets created and held in common, and these might include: collections, processing and technology systems and platforms, and staffed projects and services.

The legal structure of 2CUL must address the management of these assets and the need to sustain the organization in the face of institutional leadership changes. In the course of the planning process, we will investigate thoroughly issues related to dissolution of the new organization and the disposition of assets. There will need to be clarity on how the inability of one institution to meet its capital or operational commitments and responsibilities will be handled. Jim Neal, Columbia, will serve as the 2CUL lead with the governance, business planning, and legal framework consultants.

This proposed collaboration is unprecedented and moves both libraries into somewhat unchartered territory. Both libraries have had some experience in this area with new organizations, such as ReCAP at Columbia, involving NYPL and Princeton. But the scope and nature of 2CUL is not precedented. With so much potential and so much at stake, it is critical to surface all concerns and take the time to get this right. Mellon's support would make this possible.

Work to Date

The 2CUL concept has received the support of the respective provosts and trustees of Columbia and Cornell. In February 2009, the Senior Management Groups of the two libraries met in Ithaca for an all-day planning session and expressed support for building this relationship. Library staff members at each institution have been briefed, as have the Faculty Advisory and Student Library Advisory boards. Staff members from both institutions formed working groups (Investigative Groups) to develop proposals in the three areas noted above.

The Senior Management Groups met a second time at Columbia in April 2009 to review these proposals, identify issues needing further information, and to consider implementation strategies. Laura Brown and Eileen Fenton of Ithaka joined the meeting. Since then, several discussions have taken place via phone conference and email among the Senior Management and Investigative Groups.

Further, interest in the Columbia/Cornell collaboration is mounting within the profession. Information sessions on 2CUL were held at a CLIR-hosted April meeting of like-minded research libraries, and two sessions were held at the spring ARL meeting. Questions from individual libraries and the Ivies Plus and Borrow Direct consortia have also been fielded.

Project Timeline

The proposed project dates are October 1, 2009–December 31, 2011. Please note that the budget shows project work from October 1, 2009–September 30, 2011, but we request a grant end date of December 31, 2011 to ensure that administrative tasks can be completed within the time frame.

Year 1

The first year will be devoted to further refinement of the three areas of initial investigation, with pilot work undertaken as consensus is reached. The first months of this collaboration will be devoted to the development of a schedule of key project milestones that must be achieved to enable the establishment of an independent service agency within two years, and to lay the groundwork for 30% integration of operations, services, collections, and resources within three years. These milestones will relate both to project planning (e.g., deadlines for the development of detailed descriptions of services) and to project implementation (e.g., the commitment of library staff and resources to the planned services). The team's ability to achieve these milestones will help determine the project's progress towards success; failure to reach milestones will signal areas in the partnership which may need resolution in order to move 2CUL forward.

There are several critical factors that must be addressed and settled for Columbia and Cornell to move beyond an initial exploration and to make a commitment in the three key areas chosen. There must be understanding of the cost/benefits of co-investment and deep collaboration and recognition in the libraries and at the universities that more quality can be achieved together at lower cost. There must be an embracing of a separate governance structure for 2CUL activities, programs, and services, with the support of campus administrations. There needs to be a willingness and ability to transfer funds to the 2CUL organization. There must be support for collective ownership of collections and other resources and a mechanism for shared accounting, processing, and technology systems. The 2CUL planning process will further identify additional areas that define progress and success.

The teams from both Columbia and Cornell will meet on a regular basis, rotating between New York City, Ithaca, and a mid-point location. Ithaka consultants will participate in most of those meetings. In the first year, three Senior Management meetings and twelve Investigative Group meetings (four meetings each for the three Investigative Groups) will be held.

Further, the bulk of the data mining and analysis proposed here will take place during the first year of the project. We will also purchase equipment and establish infrastructure support for video conferencing at Columbia and Cornell.

We will engage consultants late in the first year and throughout the second year to guide the two universities in the development of detailed models in the areas of governance, business planning, and legal framework, which will be used to involve the budget and legal offices at both universities.

Year 2

The second year will be devoted to implementing collaborative arrangements in the three areas of initial investigation and developing new areas for investigation. We will prepare white papers, proposals, presentations, and a CLIR report documenting the progress of 2CUL.

In the second year, three Senior Management meetings and six Investigative Group meetings (two meetings each for the three Investigative Groups) will be held.

D. EXPECTED OUTCOMES AND BENEFITS

Columbia and Cornell request support from The Andrew W. Mellon Foundation for the initial two-year planning period, with the objective to develop the foundation of and begin to implement a detailed action plan for the long-term collaboration. Because this is the planning stage, we cannot accurately forecast the exact outcomes. But the progress of the partnership will be thoroughly documented, and we expect deliverables of the two-year grant to include:

- A governance structure for the partnership.
- Business and legal plans.
- Defined milestones and success metrics to evaluate cost-savings, new revenue generation, and co-investment opportunities.
- Documents detailing project scope, work plans, timelines, critiques and feedback.
- White papers, proposals, and presentations.
- Meeting agendas and supporting documents.
- Publication of a CLIR report.
- Interim and final reports to the Mellon Foundation.

The long-term vision and expected benefits, beyond the two-year grant period, include:

- Achieving 30% integration of operations, services, collections, and resources into 2CUL within three years.
- Reducing 15% in overall library expenses to address university budget reductions at each institution and/or to direct resources to new growth areas.
- Co-investing in critical, under-supported areas, including data curation, new media art, scholarly communication, and cross-disciplinary collaborative research.
- Increasing revenues through joint proposals for funding, new products and services, and business opportunities marketed to academic community customers.
- Developing strategic partnerships with other divisions on campus (university presses, IT, university counsel, international affairs, computer and information science departments, etc.).
- Advocating collectively within New York State, professional organizations, consortia, and in

negotiation with commercial entities.
- Sharing measures for success and impact to guide our work.
- Expanding 2CUL beyond the initial partners within our respective universities, state, and the research library community.

2CUL represents a new, radical form of collaboration that pairs two leading research libraries in a voluntary, equal partnership. Among the top ten ARL libraries, members of the Ivy League, and New York State institutions, Columbia and Cornell are well-respected leaders in the research library community. It is not a stretch to imagine that 2CUL will model a new chapter in collaboration, providing the "cover" and blueprint for other ARL libraries to form bilateral/trilateral relationships that can ultimately be linked into broader, non-exclusive relationships. One can even imagine the model extending to other parts of the academy, pairing IT organizations or university presses across institutional borders, for example. Within New York, 2CUL might evolve to provide services for information initiatives supported by the state. These possible futures depend a great deal on how well we develop the Columbia/Cornell partnership.

E. INTELLECTUAL PROPERTY ISSUES

As the 2CUL project progresses, if we decide to develop software, other technologies, or electronic content with Foundation funds, 2CUL will communicate with Mellon and sign an intellectual property agreement in accordance with the Foundation's intellectual property policy. But at this stage, we do not expect to develop software, other technologies, or electronic content with Mellon Foundation funds.

F. LONG-TERM SUSTAINABILITY

At the end of two years, we fully expect to establish an independent service entity (2CUL) that supports both Columbia and Cornell libraries and their respective universities. Funding for this entity will come from the respective library budgets at each institution, requiring the establishment of accounting processes to support this work. With the integration of operations, services, and collections, 2CUL will manage a considerable budget, fund joint staff positions, and manage the collective ownership of library materials, technology platforms, and other resources. Sustainability of this partnership is *not* dependent on external funding, but a redirect of operating expenses. Our long-term success is most dependent on fully understanding the consequences of this proposed partnership, securing administrative and academic support, and creating the requisite business plan and legal and policy framework to guide an enduring arrangement.

2CUL will serve as a prospective model for bilateral collaborations between other research libraries. 2CUL could expand to include other institutions and could market and sell its services to other libraries.

However, a critical part of the grant-funded planning process will be the development of exit strategies and enforcement mechanisms for the newly created entity. In order to accomplish this, we will:

- Investigate and evaluate models where institutions in the educational and cultural sectors have come together to jointly invest and administer areas of common interest to produce efficiencies, manage resources, and advance shared goals.
  - o Columbia and Cornell libraries have had some experience in this area with new organizations, such as ReCAP at Columbia, involving NYPL and Princeton.
- Determine assets to be created and held in common. (These are likely to include collections, processing and technology systems and platforms, and staffed projects and services.)
- Investigate issues related to dissolution of the new organization and the disposition of assets.
- Determine consequences if one institution fails to meet its capital or operational commitments and responsibilities.

As a result, during this process, we expect to develop procedures to:

- Manage assets newly created and/or held in common.
- Sustain the organization in the face of institutional leadership changes.
- Add additional universities as full partners or affiliates.
- Enforce mechanisms if one institution fails to meet its capital or operational commitments and responsibilities.
- Dissolve the new organization and dispose assets, if necessary.

G. REPORTING

The proposed project dates are October 1, 2009–December 31, 2011. We propose the following reporting schedule:

Reports	Due date
Interim narrative and financial reports covering October 1, 2009–September 30, 2010	December 31, 2010
Final narrative and financial reports focusing on October 1, 2010–December 31, 2011 (but presenting a comprehensive report of the project)	March 31, 2012

Jim Neal, Anne Kenney, or Karen Kapp (Grants Officer at Columbia) will submit the narrative reports to the Foundation. The narrative reports will describe activities achieved during the reporting period and how grant funds were used for those activities. The reports will also include a description of the project and purpose of the grant, setbacks or challenges, personnel changes, any related publications, and plans and goals for the upcoming year. To evaluate the progress,

our reports will reference deliverables listed in the Expected Outcomes and Benefits (page 24).

The financial reports are prepared and issued by Columbia's Sponsored Projects Finance, part of the Office of the Controller, but the narrative report will include a commentary on the expenditures, explaining as appropriate significant departures from the budget.

H. Budget Narrative

The proposed project dates are October 1, 2009–December 31, 2011. Please note that the budget and timelines show project work from October 1, 2009–September 30, 2011, but we request a grant end date of December 31, 2011 to ensure that administrative tasks (e.g., invoice processing) can be completed within the grant timeframe.

Personnel
Columbia and Cornell will contribute the time and expertise of many employees to the project. At Columbia, James G. Neal, Vice President for Information Services and University Librarian, will direct the project. The Senior Management Group and Investigative Group members will also contribute their time in-kind.

At Cornell, Anne R. Kenney, the Carl A. Kroch University Librarian, will direct the project. The Senior Management Group and Investigative Group members will also contribute their time in-kind.

This co-investment of personnel is a significant contribution to the project. Both institutions are dedicating substantial time and effort, but we recognize the need for external guidance to ensure that our progress into this new territory is sound and successful.

Consultants
As described in the charts below, Ithaka's proposed fee of $99,700 for Year 1 would cover all staff time and overhead, as well as any expenses associated with a three-person team traveling outside New York City for two meetings. The proposed fee of $102,691 for Year 2 assumes a 3% increase in all costs. A work plan outlining the timeframe for the outlined services and deliverables will be developed jointly with 2CUL leadership at the outset of the engagement.

Year 1 Staff Allocations and Costs

	Days	Daily Rate	Total
President	6	$ 2,500	$ 15,000
Senior Leadership	24	$ 1,750	$ 42,000
Project Analyst	62	$ 650	$ 40,300
Travel Budget			$ 2,400
TOTAL – Year 1			**$ 99,700**

Year 2 Staff Allocations and Costs

	Days	Daily Rate	Total
President	6	$ 2,575	$ 15,450
Senior Leadership	24	$ 1,803	$ 43,260
Project Analyst	62	$ 670	$ 41,509
Travel Budget			$ 2,472
TOTAL – Year 2			**$ 102,691**

Additional consultants (to be determined) will be hired for data mining and analysis. There are many enterprise-level business intelligence products, but none directly meets research data mining needs of research libraries in general or of this project in particular. As a result, Cornell and Columbia seek support to hire a consultant to scope the data mining needs (six days at a daily rate of $1,500 for process, cost dimension, and data sources consulting; eight days at a daily rate of $2,000 for data warehouse consulting, with a combined total cost of $25,000), and then conduct pre-implementation data analysis, drawing on data from various sources, and conduct modeling and test runs to prototype a system (0.25 FTE of a data analyst and data warehouse developer, estimated at a composite salary/benefits of $100,000 per year, for a total of $25,000). Columbia and Cornell expect to invest in the design and development of an automated system, based on these requirements. The level of investment can only be determined after data mining needs are defined, product market research is conducted, and a 2CUL gain-and-loss analysis is done.

Further, we have budgeted $65,000 over the two years for consultants (to be determined) to guide us in the areas of governance, business planning, and legal framework. At a $1,500 daily rate plus travel costs, we forecast:

Year 1
12 days ($18,000) plus $7,000 travel (3 visits) = $25,000

Year 2
20 days ($30,000) plus $10,000 travel (4 visits) = $40,000

Equipment (Video Conferencing)
The Senior Management and Investigative Groups must maintain close contact, requiring the establishment of virtual communication capabilities at both libraries. We have budgeted $49,000 ($24,500 per institution). We will procure the equipment in the first year, and the online collaborative tools require subscription costs of $1,500 per year. The following describes the details for each institution.

Columbia proposes:
- A portable high-definition video conference unit, for groups up to 12 people ($10,000)
- Laptops for video conferencing, one for each investigative group (3 laptops) ($7,500)
- A noise-canceling voice conferencing system ($1,500)
- Portable Polycomm speakerphones (5 speakerphones) ($2,500)
- Online collaborative tools (screen-sharing web pages, code sharing, etc.) ($1,500 per year)

Cornell proposes:
- A permanent high-definition video conference unit, for groups up to 12 people ($10,000)
- A portable high-definition video conference unit, for groups up to 12 people ($10,000)
- A noise-canceling voice conferencing system ($1,500)
- Online collaborative tools (screen-sharing web pages, code sharing, etc.) ($1,500 per year)

Travel/Meetings
Although video conferencing will allow for regular communication, the project teams will also need to meet in person. We have budgeted $18,000 for travel/meetings over the two years ($9,000 per institution). Costs for each meeting include car rental ($100), conference room rental ($400), and meeting refreshments ($250), for a total of $750 per meeting. Columbia and Cornell will divide these costs evenly, as shown in the budget. We propose:

Year 1
- Three Senior Management meetings ($750 per meeting for a total of $2,250)
- Twelve Investigative Group meetings (four meetings each for the three Investigative Groups at $750 per meeting for a total of $9,000)

Total for Year 1 = $11,250

Year 2
- Three Senior Management meetings ($750 per meeting for a total of $2,250)
- Six Investigative Group meetings (two meetings each for the three Investigative Groups at $750 per meeting for a total of $4,500)

Total for Year 2 = $6,750

COLUMBIA UNIVERSITY LIBRARIES/INFORMATION SERVICES
CORNELL UNIVERSITY LIBRARY
THE ANDREW W. MELLON FOUNDATION
2CUL Collaboration

Budget for the period October 1, 2009 to September 30, 2010
YEAR 1

Description of Expense	Year 1
Columbia University Libraries	
Consultants	
Ithaka Strategic Services	$99,700
Legal, Financial, and Business Planning	$25,000
Total Consultants	**$124,700**
Equipment	
Video Conferencing Capabilities	$23,000
Total Equipment	**$23,000**
Travel/Meetings	
1 Senior Management Meeting, 6 Investigative Group Meetings	$5,250
Total Travel Meetings	**$5,250**
Total Columbia University Libraries	**$152,950**
Cornell University Library Subaward	
Consultants	
Data Mining and Analysis	$50,000
Total Consultants	**$50,000**
Equipment	
Video Conferencing Capabilities	$23,000
Total Equipment	**$23,000**
Travel/Meetings	
2 Senior Management Meetings, 6 Investigative Group Meetings	$6,000
Total Travel Meetings	**$6,000**
Total Cornell University Library Subaward	**$79,000**
Year 1 Costs	**$231,950**

COLUMBIA UNIVERSITY LIBRARIES/INFORMATION SERVICES
CORNELL UNIVERSITY LIBRARY
THE ANDREW W. MELLON FOUNDATION
2CUL Collaboration

Budget for the period October 1, 2010 to September 30, 2011
YEAR 2

Description of Expense	Year 2
Columbia University Libraries	
Consultants	
Ithaka Strategic Services	$102,691
Legal, Financial, and Business Planning	$40,000
Total Consultants	**$142,691**
Equipment	
Video Conferencing Capabilities	$1,500
Total Equipment	**$1,500**
Travel/Meetings	
2 Senior Management Meetings, 3 Investigative Group Meetings	$3,750
Total Travel Meetings	**$3,750**
Total Columbia University Libraries	**$147,941**
Cornell University Library Subaward	
Consultants	
Data Mining and Analysis	$0
Total Consultants	**$0**
Equipment	
Video Conferencing Capabilities	$1,500
Total Equipment	**$1,500**
Travel/Meetings	
1 Senior Management Meeting, 3 Investigative Group Meetings	$3,000
Total Travel Meetings	**$3,000**
Total Cornell University Library Subaward	**$4,500**
Year 2 Costs	**$152,441**

COLUMBIA UNIVERSITY LIBRARIES/INFORMATION SERVICES
CORNELL UNIVERSITY LIBRARY
THE ANDREW W. MELLON FOUNDATION
2CUL Collaboration

Budget for the period October 1, 2009 to September 30, 2011
PROJECT BUDGET

Description of Expense	Project
Columbia University Libraries	
Consultants	
Ithaka Strategic Services	$202,391
Legal, Financial, and Business Planning	$65,000
Total Consultants	**$267,391**
Equipment	
Video Conferencing Capabilities	$24,500
Total Equipment	**$24,500**
Travel/Meetings	
3 Senior Management Meetings, 9 Investigative Group Meetings	$9,000
Total Travel Meetings	**$9,000**
Total Columbia University Libraries	**$300,891**
Cornell University Library Subaward	
Consultants	
Data Mining and Analysis	$50,000
Total Consultants	**$50,000**
Equipment	
Video Conferencing Capabilities	$24,500
Total Equipment	**$24,500**
Travel/Meetings	
3 Senior Management Meetings, 9 Investigative Group Meetings	$9,000
Total Travel Meetings	**$9,000**
Total Cornell University Library Subaward	**$83,500**
Project Costs	**$384,391**

THE ANDREW W. MELLON FOUNDATION
2CUL Collaboration

Budget for the period October 1, 2009 to September 30, 2011
SUMMARY

Description of Expense	Year 1	Year 2	Project
Columbia University Libraries			
Consultants			
Ithaka Strategic Services	$99,700	$102,691	**$202,391**
Legal, Financial, and Business Planning	$25,000	$40,000	**$65,000**
Total Consultants	$124,700	$142,691	**$267,391**
Equipment			
Video Conferencing Capabilities	$23,000	$1,500	**$24,500**
Total Equipment	$23,000	$1,500	**$24,500**
Travel/Meetings			
3 Senior Management Meetings, 9 Investigative Group Meetings	$5,250	$3,750	**$9,000**
Total Travel Meetings	$5,250	$3,750	**$9,000**
Total Columbia University Libraries	$152,950	$147,941	**$300,891**
Cornell University Library Subaward			
Consultants			
Data Mining and Analysis	$50,000	$0	**$50,000**
Total Consultants	$50,000	$0	**$50,000**
Equipment			
Video Conferencing Capabilities	$23,000	$1,500	**$24,500**
Total Equipment	$23,000	$1,500	**$24,500**
Travel/Meetings			
3 Senior Management Meetings, 9 Investigative Group Meetings	$6,000	$3,000	**$9,000**
Total Travel Meetings	$6,000	$3,000	**$9,000**
Total Cornell University Library Subaward	$79,000	$4,500	**$83,500**
Project Costs	**$231,950**	**$152,441**	**$384,391**

2CUL
The Columbia University Libraries/Information Services
Cornell University Library

APPENDICES

A. CVs for Principal Investigators

B. Proposal from Ithaka Strategic Services

C. Background Information, George Jurkowich, Azimuth

James G. Neal

Vice President for Information Services and University Librarian
Columbia University
517 Butler Library, 535 West 114th Street, MC1101
New York, NY 10027
212-854-2247, fax: (212) 854-4972
jneal@columbia.edu, http://www.columbia.edu/~jneal

Jim Neal is currently the Vice President for Information Services and University Librarian at Columbia University, providing leadership for university academic computing and a system of twenty-five libraries. He serves on key academic, technology, budget and policy groups at the University. Previously, he served as the Dean of University Libraries at Indiana University and Johns Hopkins University, and held administrative positions in the libraries at Penn State, Notre Dame, and the City University of New York. At Columbia, he has focused in particular on the development of the digital library, special collections, global resources, instructional technology, building construction/renovation, and fundraising programs.

Neal has served on the Council and Executive Board of the American Library Association (ALA), on the Board and as President of the Association of Research Libraries (ARL), and as Chair of OCLC's Research Library Advisory Council. He currently is Chair of the Board of Directors of the Research Libraries Group (RLG), on the Board of the National Information Standards Organization (NISO), and on the Board of the Freedom to Read Foundation. He has also served on numerous international, national and state professional committees, and is an active member of the International Federation of Library Associations (IFLA).

Neal is a frequent speaker at national and international conferences, consultant and published researcher with a focus in the areas of scholarly communication, intellectual property, digital library programs, organizational change, staff turnover, and fundraising. He has worked on the editorial boards of journals in the field of academic librarianship. He has served on the Scholarly Communication Committees of ARL and ACRL and as Chair of the Steering Committee of SPARC, the Scholarly Publishing and Academic Resources Coalition, and currently serves on the Board of the Columbia University Press. He has represented the American library community in testimony on copyright matters before Congressional committees and was an advisor to the U.S. delegation at the World Intellectual Property Organization (WIPO) diplomatic conference on copyright. He has worked on copyright policy and advisory groups for universities and for professional and higher education associations. He was selected the 1997 Academic/Research Librarian of the Year by ALA's Association of College and Research Libraries and recipient of ALA's 2009 Melvil Dewey Medal Award.

Professional Employment

Columbia University (New York, NY)

- Vice President for Information Services and University Librarian, 2001-

Johns Hopkins University (Baltimore, MD)

- Dean of University Libraries, 1998-2001
- Sheridan Director, Milton S. Eisenhower Library, 1995-2001

Indiana University (Bloomington, IN)

- Dean of University Libraries, 1989-1995
- Adjunct Professor, School of Library and Information Science, 1989-1994

Pennsylvania State University (State College, PA)

- Assistant Dean and Head, Reference and Instructional Services Division, University Libraries, 1983-1989
- Council on Library Resources, Academic Library Management Intern, 1981-1982

University of Notre Dame (South Bend, IN)

- Assistant Director for Memorial Library Public Services, 1982-1983
- Head of the Collection Management Department, 1979-1981
- Head of the College Library Department, 1977-1979

Queensborough Community College of the City University of New York (Bayside, NY)

- Social Sciences Librarian, 1973-1976

Education

1965 - 1969 **Rutgers University,** Bachelor of Arts (Russian Studies)

1969 - 1971 **Columbia University,** Master of Arts (History)

1972 - 1973 **Columbia University,** Master of Science (Library Science)

1974 - 1978 **Columbia University**, Certificate in Advanced Librarianship and Doctoral Candidate (Library Science)

ANNE R. KENNEY

PROFESSIONAL EXPERIENCE:

2008-Present	*Carl A. Kroch University Librarian,* Cornell University Library. Responsible for leading one of the world's largest research libraries, with a total budget of over $50 million, a staff of more than 450, and close to 8 million volumes.
2007-2008	*Interim University Librarian,* Cornell University Library.
2006-2007	*Senior Associate University Librarian for Public Services and Assessment,* Cornell University Library. Responsible for administering a staff of 200 plus encompassing seven divisions, 10 libraries, and a budget in excess of $18 million. Senior administrator for public services system-wide.
2002-2006	*Associate University Librarian for Instruction,* Research, and Information Services, Cornell University Library. Responsible for administering a staff of 160 encompassing seven divisions, 6 libraries, and a budget of $15 million. Senior administrator for public services system-wide. Strong grants track record totaling funds in excess of $7 million over the past decade.
2000-2002	*Director of Programs,* Council on Library and Information Resources, Washington, DC. (half time position)
1987-2001	*Associate Director,* Department of Preservation and Conservation, Cornell University Library.
1982-1986	*Associate Director,* Joint Collection-Western Historical Manuscripts and University Archives, University of Missouri-St. Louis.

EDUCATION:

1972	BA, Duke University, cum laude
1975	MA, History, University of Missouri-St. Louis, with distinction
1979	MALS, University of Missouri-Columbia (4.0 GPA)

HONORS:

- Co-author of three award-winning monographs
- Recipient of Yahoo! en español's award for online Tutorial de Digitalización de Imágenes as the best of the year 2002 in the category "Internet y computadoras."
- Recipient of the Society of American Archivists' Best Book Award (Leland Prize), 1997 and 2000 and the SAA Preservation Publication Award in 1995 and 2004
- Recipient of the 2001 LITA/Library Hi Tech Award for Outstanding Communication in Library and Information Technology, American Library Association
- Distinguished Alumna Award, University of Missouri-St. Louis, 1994

PROFESSIONAL ACTIVITIES:

Member, Advisory Committee of Portico, 2005-

Member, Standing Committee on Libraries and Archives of Cuba, Social Science Research Institute, 2000- , executive committee 2004

Member, National Science Foundation/European Union Working Group on a Digital Preservation Research Agenda, 2001-2002

Member, RLG/OCLC Working Group on the Attributes of a Trusted Digital Repository, 2001

Commissioner, National Historical Publications and Records Commission, and Chair of the Executive Committee 1996 - 2000

Clinton-Gore Transition Team, member of three person review team for the National Archives, Education/Labor/Arts and Humanities Cluster, December 1992

Expert Witness, U.S. Senate Subcommittee on Governmental Operations, hearing on the Papers of Supreme Court Justices, May 1993

International Council on Archives, Imaging Committee (1993-1996)

Society of American Archivists, 1978-
  Vice President/President (1991-93)
  Council 1984-1986, Executive Committee, 1986
  Book Review Editor, *American Archivist* (1986-1990)

RESEARCH INTERESTS:

Digital imaging, digital preservation, public services, users' information seeking behavior

PUBLICATIONS:

Monographs:
  Anne R. Kenney and Oya Y. Rieger, *Moving Theory into Practice: Digital Imaging for Libraries and Archives* (Research Libraries Group, 2000). Winner of the Society of American Archivists (SAA) Leland Prize for writing of superior excellence and usefulness.

  Anne R. Kenney and Stephen Chapman, *Digital Imaging for Libraries and Archives* (Cornell University Library 1996). Winner of the Society of American Archivists (SAA) Leland Prize for writing of superior excellence and usefulness.

  Steven C. Hause and Anne R. Kenney, *Women's Suffrage, Social Politics, and the French Third Republic* (Princeton University Press, 1984). Winner of the Distinguished Book Award, Missouri Conference on History (1985), Outstanding Academic Book Selection, *Choice* (1985), and Phi Alpha Theta's Best First Book Award (1986).

Co-editor of *RLG DigiNews* (1997-2006)
  …et al, "Digital Preservation Management: Short-term Solution for Long-term Problems," online tutorial, winner, Society of American Archivists' 2004 Preservation Publication Award

  …. et al, "Moving Theory into Practice: Digital Imaging for Libraries and Archives," online tutorial,

winner Yahoo! en español's best of the year 2002 in the category "Internet y computadoras."

Selected Articles, Reports

…et al, *E-Journal Archiving Metes and Bounds: A Survey of the Landscape,* Council on Library and Information Resources, September 2006

Nancy Y. McGovern, Anne R. Kenney, et al, "Virtual Remote Control: Building a Preservation Risk Management Tool Box for Web Resources," *D-Lib Magazine*, April 2004.

… and Deirdre C. Stam, *The State of Preservation Programs in American College and Research Libraries: Building a Common Understanding and Action Agenda*, CLIR, 2002

… and Nancy Y. McGovern, et al, "Preservation Risk Management for Web Resources: Virtual Remote Control in Cornell's Project Prism," *D-Lib Magazine*, January 2002.

…, "Digital Image Quality: From Conversion to Presentation and Beyond," in *Technology and Scholarly Communication,* (University of California Press, 1999)

… Louis H. Sharpe II, and Barbara Berger, "Illustrated Book Study: Digital Conversion Requirements of Illustrations," *Proceedings of the 2nd European Conference on Digital Libraries,* (Springer 1998)

, "Conversion of Traditional Source Materials into Digital Form," *A Research Agenda for Arts and Humanities Computing***,** The Getty Art History Information Program, 1996.

…, *Digital to Microfilm Conversion: A Demonstration Project, 1994-1996 Final Report* (1996) www.cornell.library.edu/preservation/pub.htm

…, "Digital to Microfilm Conversion: An Interim Preservation Solution," *Library Resources and Technical Services* (October 1993)

Stephen Chapman and Anne R. Kenney, "Digital Conversion of Research Library Materials: A Case for Full Informational Capture," *D-Lib Magazine* (October 1996)

Anne R. Kenney and Stephen Chapman, *Tutorial—Digital Resolution Requirements for Replacing Text-based Material: Methods for Benchmarking Image Quality* (Commission on Preservation and Access, 1995), winner of the 1995 SAA Preservation Publication Award

2CUL Ithaka Proposal
May 22, 2009

Columbia University Library and Cornell University Library are embarking on a path-breaking collaboration to integrate resources, collections, services and expertise across organizations. The changes in library services precipitated by the digital age, as well as the restrictions imposed on budgets by today's challenging financial climate, have created an opportunity and incentive for your libraries to work together to accomplish current tasks more efficiently and to develop innovative solutions to new challenges. Your goals are both financial—achieving cost savings through shared services and joint collections, improving productivity and limiting redundancy, and generating additional revenues—and non-financial—improving the quality of collections and services available to important constituencies, and redirecting resources towards new areas. Your initial focus will be to investigate and test potential collaborations around technical services (acquisitions, cataloging, etc), joint collection development (global resources and area studies), and infrastructure (joint repositories and data/web curation efforts). These fields will create benefits for your institutions directly, while also modeling the way that collaboration in new areas could take place in the future.

We understand that you are applying for funding from The Andrew W. Mellon Foundation to support the first two years of this collaboration. You hope to allocate part of this funding to support a range of services—including project management and meeting facilitation, work planning, market research, communications planning, and general advisory contributions—from a trusted third party. We at Ithaka are delighted to have been invited to contribute to the 2CUL collaboration by providing this range of support services, and we believe that our expertise and background could be of benefit to this important endeavor.

Ithaka is strongly committed to helping the academic community use digital technologies to advance scholarship and teaching and to reduce system-wide costs. We work to advance this mission in a number of ways: by making high-quality content available through JSTOR, by ensuring the long-term digital preservation of scholarship through Portico, and, critically, through supporting innovative initiatives and conducting broadly valuable investigations through Ithaka Strategic Services and Research. Consistent with this mission, we are eager to support libraries as they organize and collaborate in new and innovative ways to drive important community-focused change such as the 2CUL initiative contemplates. Enacting significant change at just one institution is difficult, and bridging cultural differences across your two large libraries and institutions will be even more challenging. We believe that Ithaka's connections to and understanding of the library and higher education community will allow us to help you articulate and achieve common aims.

In keeping with our mission, Ithaka Strategic Services and Research seek out a limited number of important opportunities where there is potential to initiate or accelerate system-wide change and where our impact will outlast the duration of our direct consulting involvement with a project. We are particularly excited by Columbia's and Cornell's commitment to integrate the 2CUL partnership deeply into the general operations of your libraries—and your desire to fund the new organization with the cost-savings achieved through the collaborative services–as we believe that this level of serious and sustained institutional commitment will be fundamental to the partnership's successful launch of innovative approaches to library services. Participating in the two-year 2CUL planning and pilot phase is a major commitment of Ithaka's time and resources, and one which we do not undertake lightly. We are eager to do make this commitment because we believe that the success of innovative collaborations such as 2CUL will be critical to the

ongoing ability of the university library community to provide essential services. If successful, 2CUL may offer a new model that other libraries could adopt in order to extend their ability to offer constituents enhanced services and collections at reduced cost.

Below, we outline the services and deliverables which Ithaka could provide to the 2CUL collaboration and describe the ways in which our knowledge and expertise could be an asset to your work.

Services and Deliverables

Project Management and Facilitation
To allow the partner organizations to focus on the substance of their evolving collaboration, Ithaka would provide a range of project management and facilitation services to support the needs of the 2CUL pilot. Our ability to successfully fulfill the role of project manager and facilitator will be dependant on our integration and participation in the ongoing development of the project at a high-level and a clear definition of roles for project partners and facilitators.

- *Defining milestones and metrics for success* – In close consultation with representatives from Columbia and Cornell, Ithaka will develop clear benchmarks and metrics to help evaluate the success of the 2CUL collaboration. Success metrics will be directly connected to the expressed goals of the project, including integration of operations, services and resources; cost-savings and new revenue generation; and co-investment in new areas. High-level milestones will be established for the initiative as a whole, while more detailed benchmarks and metrics will be set for the different areas of investigation (technical services, joint collection development, technology infrastructure, etc). This clear set of success criteria will help partners focus on shared objectives and will also help the project team determine what avenues of exploration are within the scope of the current phase of work, and what might be better saved for later stages.
- *Developing a work plan* – Based on agreed-upon milestones and success metrics, Ithaka will develop a detailed work plan to ensure that the 2CUL partners make steady progress towards important project deliverables by completing intermediate steps on time. This work plan will include a schedule for the completion of key action items and individuals/teams responsible for them. The plan will be a living document, managed, updated, and refined by Ithaka and 2CUL leadership as the project progresses and as action items are assigned to different teams.
- *Establishing a governance structure* – Ithaka will work with 2CUL leadership to define and establish decision-making procedures and governance structures for this pilot phase of the project. Initially, Ithaka will provide input and suggestions into options 2CUL might adopt. After 2CUL confirms a particular option, Ithaka will incorporate it into work plans and meeting agendas to help ensure that established procedures are followed.
- *Facilitating meetings* – Ithaka representatives will provide facilitation services in support of major meetings and teleconferences. These services will include defining meeting goals, circulating an agenda and supporting documents, summarizing action items, and recording and disseminating minutes. When appropriate, Ithaka representatives will moderate major sessions to ensure that conversation stays on track, all perspectives are heard, and critical decisions are reached and clearly communicated. In addition, Ithaka can provide a neutral, off-campus location to host meetings in New York City if desired by the 2CUL partners.

Deliverables for this element will include a document outlining project milestones and success metrics, a document outlining governance structures for the partnership, a work plan that includes a timeline for completion of key action items, and documents related to meeting planning (agendas, minutes, etc).

General Consulting and Advisory Services
In addition to facilitating the management of this complex project, Ithaka also will provide general consulting and advisory services to 2CUL at various stages of work. Ithaka's overarching goal in these areas will be to represent the interests of the partnership and the new 2CUL service organization and to facilitate buy-in from relevant stakeholders.

- *Advising on the business plan* – To ensure that Columbia and Cornell can sustain the 2CUL partnership beyond the grant period, Ithaka will provide ongoing input and feedback on the 2CUL business plan as it evolves.
- *Communications planning* – To secure the support of a diverse group of internal stakeholders (including library staff, university IT, university administration, faculty, and students) and external stakeholders (BorrowDirect Consortium, others in the library community), strategic communication about 2CUL will be essential. To this end, Ithaka will support and advise on the development of a high-level communications plan to inform others about the project. This plan, which will evolve and develop along with the project, will define which stakeholders should be informed of essential project milestones, which messages are critical to communicate to them, and the best style and timing for those communications.
- *Organizing research* – It is highly likely that the 2CUL project team will identify several areas which will require further study and research, such as faculty needs and preferences, and existing models for library collaborations. In some cases, Ithaka may take the lead on this work; in other cases, we may provide guidance on the questions that project participants need to answer and the resources that could help them discover answers.
- *Providing critiques of documents and materials* – The 2CUL partnership will produce a range of important documents defining project scope and direction; these may include white papers, grant proposals, articles, presentations, and other documents. Ithaka will act as a reader for these documents at multiple stages of their drafting and development, to provide input into ways that they could be strengthened.
- *Providing an outside perspective* – At all stages of the 2CUL project, Ithaka will provide an outside perspective, asking provocative questions and challenging the 2CUL team to think through new angles and to consider a range of new approaches to issues critical to 2CUL's success.

Deliverables will include timely feedback, both in the form of written memos and verbal commentary, on key documents produced and decisions made by the 2CUL project.

Ithaka's Background and Expertise

We at Ithaka are eager to support libraries as they come together in new ways to advance common interests, and are excited by the opportunity to bring our knowledge and expertise to bear in support of this important initiative. Our organization has deep ties to the university community in general—and to libraries in particular—that give us the necessary context and background to contribute meaningfully to 2CUL's work. Ithaka has a long history of

communicating effectively with the library community and understands the values which our organizations share. We believe that we could be an asset to this project in several ways.

In addition to the interpersonal connections that Ithaka leadership brings, Strategic Services and Research have engaged in extensive research into factors impacting libraries today. We have studied current models of digital scholarly publication on behalf of the Association of Research Libraries, and our large-scale surveys of faculty and librarians help track the ways these groups are adapting to the transition to the digital information environment. Ithaka has led studies on university publishing and open source software that address coordination challenges across the higher education system. And, we have conducted research into topics—such as the impact of digitization on print collections, and the optimal overlap of collections across libraries for preservation purposes—that ground us in several of the issues that the 2CUL libraries will be facing as they move to consolidate operations and services. This background leaves us well-positioned to provide a valuable third-party perspective to this work.

We also have significant experience addressing the sustainability of digital resources and services, having developed business plans for a variety of clients. We have provided support in this area to scholarly societies and independent service organizations, giving us hands-on experience with some of the strategies new organizations may adopt, challenges they may face, pitfalls they may want to avoid, and common success factors. Further, with the support of the Joint Information Systems Committee (JISC) in the United Kingdom, Ithaka is engaged in a systematic study of sustainability issues. Our 2008 report *Sustainability and Revenue Models for Online Academic Resources* proposed a general framework for thinking about sustainability, and we are about to publish a second phase of this research including findings from twelve in-depth case studies of digital resources.

Ithaka's experience with project management will also help guide the 2CUL collaboration and keep it on track. Marshalling the skills and talents of participants from a wide range of units across both organizations will be essential to the success of this initiative. Many of our clients, such as the Society for Architectural Historians and the Archivists' Toolkit, have been engaged in projects involving multi-organization collaborations, giving Ithaka experience in facilitating meetings and conversations between partners at different institutions. In addition, we have deep experience in the diverse sorts of research—from desk research, to qualitative interviews, to surveys and critical analysis—that can provide unique and essential information in support of new projects.

Resources and Timeframe

Ithaka will draw on the knowledge and expertise of a wide range of its senior staff in support of the 2CUL initiative.[1] Laura Brown, Ithaka senior advisor, and Eileen Fenton, Portico's executive director, will be responsible for overseeing this work, together devoting 2 days a month to the project. Laura will serve as the principal point of contact for high-level issues, and will be the primary advisor for issues relating to landscape/market research and business planning. Eileen will provide high-level guidance on internal and external communications planning, and will act as an internal sounding board for issues relating to library organization and technical infrastructure. Both Laura and Eileen will provide input into the development of project success metrics, milestones, and governance structures, will be available to facilitate major meetings and

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[1] Biographies for Ithaka representatives who will be involved in this project are included in the Appendix to this proposal.

provide input to sub-groups as desired. For the duration of the two-year pilot project, Laura and Eileen will also represent the interests of the emerging 2CUL enterprise, when needed, contributing insights and feedback not grounded in either the Cornell or Columbia perspective. Ithaka president Kevin Guthrie will provide significant input into project deliverables and will be available for participation in key meetings as appropriate; we estimate he would devote half a day per month, on average, to the project.

Kirby Smith, Ithaka Strategic Services analyst, will have responsibility for the day-to-day management of this engagement and will be the point-person for operational project communications. She will contribute substantially to research and deliverables, supporting the work of the project leads through tasks such as outlining, drafting, and refining key documents and deliverables, and conducing background research and preliminary analysis on a variety of topics. She will also develop, update, and manage the project work plan, and will be available to provide support for the coordination and preparation of major meetings. We estimate the she will spend 5-6 days a month on this work.

As described in the charts below, the proposed fee of $99,700 for Year 1 would cover all staff time and overhead, as well as any expenses associated with a three-person team traveling outside New York City for two meetings. The proposed fee of $102,691 for Year 2 assumes a 3% increase in all costs. A work plan outlining the timeframe for the outlined services and deliverables will be developed jointly with 2CUL leadership at the outset of the engagement.

Year 1 Staff Allocations and Costs

	Days	Daily Rate	Total
President	6	$ 2,500	$ 15,000
Senior Leadership	24	$ 1,750	$ 42,000
Project Analyst	62	$ 650	$ 40,300
Travel Budget			$ 2,400
TOTAL – Year 1			**$ 99,700**

Year 2 Staff Allocations and Costs

	Days	Daily Rate	Total
President	6	$ 2,575	$ 15,450
Senior Leadership	24	$ 1,803	$ 43,260
Project Analyst	62	$ 670	$ 41,509
Travel Budget			$ 2,472
TOTAL – Year 2			**$ 102,691**

Appendix: Ithaka Biographies

Laura Brown
Senior Advisor

Laura Brown is the director of Strategic Services at Ithaka. She led Ithaka's study of university publishing and is the co-author of the report "University Publishing in the Digital Age." Prior to joining Ithaka, Laura was the President of Oxford University Press, USA, American headquarters of the leading global scholarly publisher. At Oxford Laura managed a multifaceted program composed of scholarly, professional, trade and educational publications, and helped Oxford make the transition to digital publishing in all of its publishing divisions. Currently an Overseer of the University of Pennsylvania Libraries, Laura also serves on the boards of the MIT Press and the Meserve-Kunhardt Foundation. She holds a BA in English from Goucher College, an MA in English from Johns Hopkins University, and an MFA in Painting from Indiana University.

Eileen Fenton
Portico Executive Director

Eileen Fenton is a librarian and the founding Executive Director of Portico, a not-for-profit, permanent archive of scholarly literature published in electronic form. Since Portico began its digital preservation work in 2006 more than 8,200 journals and 4,600 e-books from 70 publishers have been committed to the archive and over 12 million articles have been preserved. Previously Eileen was Director of Production at JSTOR, where she oversaw the addition of more than 13 million pages to the archival collection. She has also worked in various positions at the Vanderbilt and Yale University libraries. Eileen is a librarian and earned her Masters of Science in Information from the University of Michigan and a Master of Arts in English Literature from the University of Kentucky.

Kirby Smith
Strategic Services Analyst

Kirby Smith is an Analyst with Ithaka's Strategic Services and Research division, which supports innovative higher education organizations and initiatives to address pressing strategic issues and establish sustainable business models. Kirby has been deeply involved in Ithaka's multi-phase investigation of issues surrounding the sustainability of digital resources; she co-authored the forthcoming report "Sustaining Digital Resources: Key Factors for Success," and authored four of the related case studies. She also co-authored the 2008 report "Current Models of Digital Scholarly Communication" on behalf of the Association of Research Libraries. In addition to these investigations, she has worked on consulting engagements for a range of clients. Recently, she served as the project manager and lead analyst for Ithaka's consulting engagement in support of a sustainability plan for WGBH's Media Library & Archives planned library of digitized footage. Other previous projects included business planning for the Archivists' Toolkit; business planning, strategic input, and communications advice for Fedora Commons; and market research in a range of fields for JSTOR. Before joining Ithaka, Kirby worked for a start-up not-for-profit organization that used web-based technologies to build support for education reform. She holds a BA in English Language and Literature from Yale University.

LIBRARY/RESEARCH ORGANIZATION PRACTICE

What We Do For Clients

Azimuth helps research libraries and organizations set clear strategic direction, maximize their effectiveness and enhance internal and external credibility. Assignments vary widely, but Azimuth always pays particular attention to stakeholder experience and expectations, and to ensuring the alignment of mission, strategy, operations and communications.

Typical engagements include:
- Organizational assessment and direction-setting (strategic planning)
- Sustainability planning
- Senior leadership transition planning and management
- Studies of user/stakeholder expectations, experience and satisfaction
- Assessment of activities and operations in relation to user/stakeholder expectations

Azimuth results and recommendations are based primarily on extended qualitative interviews and focused qualitative/quantitative surveys of representative key audiences and stakeholders.

How We Work With Clients

Azimuth always works with a client team to promote organizational buy-in and to help clients 'own' engagement results. Azimuth's intensive, highly focused project approach enables clients to:
- Identify, obtain and analyze relevant data for organizational decision-making
- Develop and articulate strategic direction and priorities
- Comprehend strategic choices clearly
- Make decisions rapidly and confidently
- Communicate strategic direction and change effectively to all affected stakeholders
- Implement actions promptly and cost-effectively

Librarians/Researchers We Have Served

The following senior library and research leaders, among others, have experience with Azimuth projects:

David S. Ferriero, New York Public Library
William Garrison, University of South Florida
Lisa Kahlden, New World Records/DRAM
Paula Kaufman, University of Illinois
Wendy Pradt Lougee, University of Minnesota
Carol Mandel, New York University
Deanna B.Marcum, Library of Congress (CLIR)
James Matisoff, STEDT, UC Berkeley

James Michalko, OCLC/RLG
James G. Neal, Columbia University
Janet Rabinowitch, Indiana University Press
David Seaman, Dartmouth University (DLF Project)
Fr. Columba Stewart, St. John's University (Minn.)
Winston Tabb, Johns Hopkins University
Suzanne Thorin, Syracuse University
Donald J. Waters, Mellon Foundation

GEORGE JURKOWICH, Principal

Over thirty years' strategy, research, organization, communications and public affairs experience in corporate and non-profit organizations, including:

- More than a decade of successful, nonprofit organizational consulting
- Twenty-plus years' experience in non-profit governance, serving as director, trustee or officer of more than a half-dozen educational, charitable and cultural nonprofit organizations
- Senior executive at four major corporations
- Experience on task forces, commissions and advisory boards for associations, government, business schools and nonprofit research organizations

az•i•muth: *direction to a point on or over the horizon, expression of deviation from that direction*